

Test Report

Number: SHAH0134040106

Applicant: HANGZHOU TIANYA INDUSTRY CO., LTD
RM 1004, B1, IBC OF EASTERN HANGZHOU, NO.600 JINSHA RD,
QIANTANG DISTRICT, HANGZHOU, 310018, ZHEJIANG CHINA
Attn: ZENG PINGJIA

Date: May 21, 2021

Sample Description:

One (1) submitted sample said to be:

Item Name : (1) Olive Green Powder (ACID YELLOW 59).

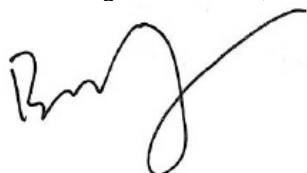
Tests Conducted:

As requested by the applicant, for details refer to attached page(s).

To be continued.

Authorized By:

For Intertek Testing Services Ltd., Shanghai



Bill Zhang
General Manager



Test Report

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Tests Conducted

1 Alkylphenol (AP) and Alkylphenol Ethoxylates (APEO) content

With Reference To ISO 18254-1: 2016, By Liquid Chromatographic – Mass Spectrometric (LC-MS) Analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
Nonylphenol (NP)	ND
Octylphenol (OP)	ND
Nonylphenol Ethoxylate (NPEO)	ND
Octylphenol Ethoxylate (OPEO)	ND

Remark: Detection Limit = 10 mg/kg
ND = Not Detected

2 Monochlorophenol (MonoCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
2- MonoCP	ND
3- MonoCP	ND
4- MonoCP	ND
Sum	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

3 Dichlorophenol (DiCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
2,3- DiCP	ND
2,4- DiCP	ND
2,5- DiCP	ND
2,6- DiCP	ND
3,4- DiCP	ND
3,5- DiCP	ND
Sum	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

To be continued.



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4 Trichlorophenol (TriCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
2,3,4- TriCP	ND
2,3,5- TriCP	ND
2,3,6- TriCP	ND
2,4,5- TriCP	ND
2,4,6- TriCP	ND
3,4,5- TriCP	ND
Sum	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

5 Tetrachlorophenol (TeCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
2,3,5,6-TeCP	ND
2,3,4,6-TeCP	ND
2,3,4,5-TeCP	ND
Sum	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

6 Pentachlorophenol (PCP) content

By KOH extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
Pentachlorophenol (PCP)	ND

Remark: Detection Limit = 0.5 mg/kg
ND = Not Detected

To be continued.



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Tests Conducted

7 Orthophehyl phenol (OPP) content

By solvent extraction and Gas Chromatography-Mass Spectrometry (GC-MS) analysis.

<u>Tested component</u>	<u>Tested Result (mg/kg)</u>
(1)	3.1

Remark: Detection Limit = 0.5 mg/kg

8 Quinoline and Isoquinoline Content

Solvent extraction and followed by Gas Chromatography- Mass Spectrometry (GC-MS) analysis.

<u>Compound</u>	<u>Tested Result In mg/kg</u> <u>Tested Component (1)</u>
Quinoline	4709
Isoquinoline	1687

Remark: Detection Limit = 10 mg/kg
ND = Not Detected

9 Chlorinated Benzenes And Toluenes

By Solvent Extraction And Followed By Gas Chromatography- Mass Spectrometry (GC-MS) Analysis.

<u>Compound</u>	<u>Cas No.</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
Monochlorobenzene	108-90-7	ND
Dichlorobenzenes	various	0.1
Trichlorobenzenes	various	ND
Tetrachlorobenzenes	various	ND
Pentachlorobenzenes	608-93-5	ND
Hexachlorobenzenes	118-74-1	ND
Chlorotoluenes	various	ND
Dichlorotoluenes	various	ND
Trichlorotoluenes	various	ND
Tetrachlorotoluenes	various	ND
Pentachlorotoluenes	877-11-2	ND
Total		0.1

Remark: Detection Limit = 0.1 mg/kg
ND = Not Detected

To be continued.



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Tests Conducted

10 Detection of Allergenous Dyestuff

With reference to DIN 54231:2005, by Liquid Chromatography – Tandem Mass Spectrometry (LC-MS/MS) analysis.

<u>Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
Disperse Blue 1	ND
Disperse Blue 3	ND
Disperse Blue 7	ND
Disperse Blue 26	ND
Disperse Blue 35	ND
Disperse Blue 102	ND
Disperse Blue 106	ND
Disperse Blue 124	ND
Disperse Orange 1	ND
Disperse Orange 3	ND
Disperse Orange 37/76/59	ND
Disperse Red 1	ND
Disperse Red 11	ND
Disperse Red 17	ND
Disperse Yellow 1	ND
Disperse Yellow 3	ND
Disperse Yellow 9	ND
Disperse Yellow 39	ND
Disperse Yellow 49	ND
Disperse Brown 1	ND

Remark: Detection Limit = 50 mg/kg
ND = Not Detected

To be continued.



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Tests Conducted

11 Carcinogenic Dyes Content

With reference to DIN 54231: 2005, By Liquid Chromatography – Tandem Mass Spectrometry (LC-MS-MS) and High Performance Liquid Chromatography Photodiode Array Detector (HPLC-DAD) Analysis.

<u>Tested Compound</u>	<u>Tested Result (mg/kg)</u> <u>Tested Components (1)</u>	<u>Requirement (mg/kg)</u> <u>Class I-IV</u>
Acid Red 26	ND	50
Acid Red 114	ND	50
Basic Blue 26	ND	50
Basic Red 9	ND	50
Basic Violet 3	ND	50
Basic Violet 14	ND	50
Direct Black 38	ND	50
Direct Blue 6	ND	50
Direct Blue 15	ND	50
Direct Brown 95	ND	50
Direct Red 28	ND	50
Disperse Blue 1	ND	50
Disperse Orange 11	ND	50
Disperse Yellow 3	ND	50
Solvent Yellow 1 (4-Aminoazobenzene)	ND	50
Solvent Yellow 3 (o-Aminoazotoluene)	ND	50

Remark: Report limit = 50 mg/kg
ND = Not Detected

With Acid Digestion And Followed By Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES) Analysis.

<u>Tested Compound Δ</u>	<u>Tested Result (mg/kg)</u> <u>Tested Components (1)</u>	<u>Requirement (mg/kg)</u> <u>Class I-IV</u>
Pigment Red 104	ND	50
Pigment Yellow 34	ND	50

Remark: Report limit = 50 mg/kg
ND = Not Detected

Δ = Determination was based on elemental analysis and result was calculated based on worst scenario.

To be continued.



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Tests Conducted

12 Detection Of Amines Derived From Azocolourants and Azodyes

By Gas Chromatographic - Mass Spectrometric (GC-MS) And High Performance Liquid Chromatographic (HPLC) Analysis.

Test Method: EN 14362-1: 2012/EN 14362-3: 2012 for p-Aminoazobenzene

	<u>Forbidden</u>	<u>Cas No.</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>
1.	4-Aminodiphenyl	92-67-1	N
2.	Benzidine	92-87-5	N
3.	4-Chloro-o-Toluidine	95-69-2	N
4.	2-Naphthylamine	91-59-8	N
5.	o-Aminoazotoluene	97-56-3	N
6.	2-Amino-4-Nitrotoluene	99-55-8	N
7.	p-Chloroaniline	106-47-8	N
8.	2,4-Diaminoanisole	615-05-4	N
9.	4,4'-Diaminodiphenylmethane	101-77-9	N
10.	3,3'-Dichlorobenzidine	91-94-1	N
11.	3,3'-Dimethoxybenzidine	119-90-4	N
12.	3,3'-Dimethylbenzidine	119-93-7	N
13.	3,3'-Dimethyl-4,4'diaminodiphenylmethane	838-88-0	N
14.	p-Cresidine	120-71-8	N
15.	4,4'-Methylene-Bis(2-Chloroaniline)	101-14-4	N
16.	4,4'-Oxydianiline	101-80-4	N
17.	4,4'-Thiodianiline	139-65-1	N
18.	o-Toluidine	95-53-4	N
19.	2,4-Toluylenediamine	95-80-7	N
20.	2,4,5-Trimethylaniline	137-17-7	N
21.	o-Anisidine	90-04-0	N
22.	p-Aminoazobenzene	60-09-3	N
23.	2,4-Xylidine	95-68-1	N
24.	2,6-Xylidine	87-62-7	N
25.	Aniline	62-53-3	924

Remark: N = Not Detected
Detection Limit = 10 mg/kg

To be continued.

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13 Polycyclic Aromatic Hydrocarbons (PAHs) Content

As Per AfPS GS 2014:01 PAK, by solvent extraction and determined by Gas Chromatography – Mass Spectrometer (GC/MS).

I. Test Results

Testing Item	Tested Result (in mg/kg)
	Tested Component (1)
1. Benzo[a]anthracene	ND
2. Chrysene	ND
3. Benzo[b]fluoranthene	ND
4. Benzo[j]fluoranthene	ND
5. Benzo[k]fluoranthene	ND
6. Benzo[e]pyrene	ND
7. Benzo[a]pyrene	ND
8. Indeno[1,2,3-c,d]pyrene	ND
9. Dibenzo[a,h]anthracene	ND
10. Benzo[g,h,i]perylene	ND
11. Acenaphthylene	ND
12. Acenaphthene	ND
13. Fluorene	ND
14. Phenanthrene	ND
15. Anthracene	ND
16. Fluoranthene	ND
17. Pyrene	ND
Sum of 11-17 PAHs	ND
18. Naphthalene	0.6
Sum of 1-18 PAHs	0.6

Remark: ND= Not detected
 Detection limit = 0.2 mg/kg

To be continued.



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II. Limits for PAH in Products (for reference)

Parameter	Category 1	Category 2		Category 3	
/	To be taken material, which are intended in the mouth, or materials in toys intended and with long-term skin contact (longer than 30 s)	Materials that do not fall into category 1, with foreseeable contact to skin longer than 30 s (long-term skin contact) or short-term repeated skin contact ^{a)}		Materials that do not fall into category 1 or 2, with foreseeable contact to skin up to 30 s (short-term skin contact)	
/	/	Toys by RL 2009/48/EC	other products by ProdSG	Toys by RL 2009/48/EC	other products by ProdSG
Benzo[a]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[e]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[a]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[b]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[j]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[k]fluoranthene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Chrysene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Dibenzo[a,h]anthracene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Benzo[g,h,i]perylene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Indeno[1,2,3-c,d]pyrene	< 0.2	< 0.2	< 0.5	< 0.5	< 1
Acenaphthylen, Acenaphthen, Fluoren, Phenanthren, Pyren, Anthracen, Fluoranthen	< 1 (Sum)	< 5 (Sum)	< 10 (Sum)	< 20 (Sum)	< 50 (Sum)
Naphthalene	< 1	< 2		< 10	
Sum 18 PAHs	< 1	< 5	< 10	< 20	< 50

^{a)} Formulation "of repeated short-term skin contact" REACH Annex XVII No. 50 supplement (REGULATION (EU) No 1272/2013).

To be continued.



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Tests Conducted

14 Total Heavy Metals

Acid Digest And By Inductively Coupled Argon Plasma-Mass Spectrometry(ICP-MS) Analysis, Alkali Digest and By Ultraviolet - Visible Spectrophotometry(UV) Analysis.

<u>Tested Elements</u>	<u>CAS No.</u>	<u>Tested Result (mg/kg)</u> <u>Tested Component (1)</u>	<u>Detection Limit (mg/kg)</u>
Total Cadmium(Cd)	7440-43-9	ND	5
Total Lead(Pb)	7439-92-1	ND	10
Total Mercury(Hg)	7439-97-6	ND	0.1
Total Nickel (Ni)	7440-02-0	6.3	1.0
Total Copper (Cu)	7440-50-8	0.7	0.5
Total Zinc (Zn)	7440-66-6	2.9	1.0
Chromium(Cr)	7440-47-3	2.96*10⁴	0.1
Manganese(Mn)	7439-96-5	0.7	0.1
Total Arsenic (As)	7440-38-2	ND	10
Total Antimony (Sb)	7440-36-0	ND	10
Total Cobalt (Co)	7440-48-4	ND	10
Total Barium (Ba)	7440-39-3	0.6	0.5
Total Selenium (Se)	7482-49-2	1.5	0.1
Total Iron (Fe)	7439-92-1	205	5
Total Tin (Sn)	7440-31-5	ND	0.1
Total Silver (Ag)	7440-22-4	ND	0.1

Remark: ND = Not Detected

Tested Component:

(1) Olive Green Powder (ACID YELLOW 59).

Date Sample Received: May 13, 2021

Testing Period: May 13, 2021 to May 21, 2021

To be continued.



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Tests Conducted



End of report.

The statements of conformity reported have considered the decision rule agreed, namely that Intertek have taken account of measurement uncertainty as calculated by Intertek, and applied according to ILAC-G8/09:2019 (Non-binary acceptance based on guard band $w = U$) except designation from the customer, regulation or test specification. This decision rule only applies to the numeric test results.

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